RIVER VALE BRIDGE
(County Bridge No. 64)
Spanning the East Fork of the
White River on County Road 27
(Lawrenceport Road), 8.0 miles
southeast of Bedford
Bedford Vicinity
Lawrence County
Indiana

HAER No. IN-58

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
Northeast Region
U.S. Custom House
200 Chestnut Street
Philadelphia, PA 19106

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Location: Spanning the East Fork of the White River on County Road 27 (Lawrenceport Road) 8.0 miles southeast of Bedford.
Bedford Vicinity
Lawrence County
Indiana.

UTM: 16.551320.4291220
Quad: Bedford East Quadrangle
Lawrence County, Indiana

Engineer: Benjamin F. Nesbit, (VBCo.)
H.G. Kindred, Lawrence County Engineer

Builder: VINCENNES BRIDGE COMPANY (VBCo.)
Vincennes, Indiana

Date of Construction: July - December, 1913

Present Owner: Lawrence County
Room 28, Courthouse, Bedford, Indiana 47421

Present Use: Vehicular and pedestrian bridge

Significance: This bridge is one of the best of ten surviving examples of a pin-connected Pennsylvania Through Truss with sub-ties one in the state of Indiana. This bridge is of local significance.

Project Information: This documentation was undertaken in 1992 and completed in 1993 in accordance with the Memorandum of Agreement between the Lawrence County Commissioners, the Indiana Department of Transportation, the Advisory Council on Historic Preservation, the Federal Highway Administration, and the Indiana State historic Preservation Officer as a mitigation measure prior to the demolition of the bridge.

Mr. Robert L. Smith, P.E.
Warren T. Hobson and Associates, Inc.
567 Westfield Boulevard, West Drive
Indianapolis, Indiana 46208

Description

The River Vale Bridge was constructed on an existing alignment and is at a right angle to the main channel of the East fork, White River. The grade of the existing roadbed was chosen to provide overflow area during periods of flooding.

The Vincennes Bridge Company of Vincennes, Indiana, erected this two-span 403' pin-connected Pennsylvania Through Truss with sub-ties under the watchful eye of H.G. Kindred, the Lawrence County Engineer. The structure was erected upon reconstructed existing cut limestone abutments, wingwalls and a pier. The abutments, wingwalls and the center pier were raised to an elevation higher than the Historic Flood of 1913.

Each 199' span is subdivided into twelve panels by verticals, alternately of laced channels and angles. The four panel center section contains a member (laced angles) installed parallel to and midway between the top and bottom chords. This section also has double-intersecting diagonals and counters which are additionally pinned where the diagonals, counters, and special member intersect the vertical. The top chord is on a different angle for the two-panel adjacent side section with its double-intersecting diagonals and sub-tie. The diagonals are all double die-forged eyebars. Bolted to the pin-plates at each vertical, I shaped floor beams support I shape stringers which in turn supports the asphalt patched concrete deck. The bottom chord is straight and consists of various sizes of die-forged eyebars. The clearances through this structure are a 14.1' clear roadway and the vertical clearance through the truss is 18.0'.(1)(3) This structure is reported to be one of the best, of ten surviving examples, of a pin-connected Pennsylvania Through Truss in the state of Indiana.

History of the River Vale Bridge

A search the minutes of the Lawrence County Board of Commissioners yielded very little information other than the signing of a contract between the Lawrence County Board of Commissioners and the Vincennes Bridge Co. for the construction of the River Vale Bridge over White River (East Fork) on July 14, 1913.

A diligent attempt was made to determine the historical significance of the River Vale Bridge. A detailed listing of the references which were researched has been provided.

This bridge, constructed in 1913-14 by the Vincennes Bridge Company, is built on existing reconstructed cut limestone abutments and a center pier to replace an existing bridge that was washed off the foundations by the Historic Flood of March 1913. The original pier and abutments were constructed at an unknown date.

Local residents reported that the superstructure of an existing bridge was washed off its foundations by the Historic Flood of 1913 although no mention of this structure or the Historic Flood of 1913 were encountered in the minutes of the Lawrence County Commissioners. Remnants of the old existing bridge are reported to still remain on the river bed and are located about 150' downstream. These remnants are used by the local fishermen to tie their boats while fishing, but are not normally visible except at low water during the summer. The present structure was constructed on the original pier and abutments, which were reconstructed and raised above the 1913 flood level. This bridge is of local significance.(4)

History of the River Vale Bridge, (Continued)

The name of River Vale Bridge could not be verified, however a small settlement located near this structure is known as River Vale and it is common for bridges to be named for sites nearby. The secondary name of County Bridge No. 64 is in reference to the current Bridge Inventory System required for all counties in Indiana.

Builder/Fabricator

The Vincennes Bridge Company was begun in 1899 in Vincennes, Indiana by John Oliphant, his brother Frank Oliphant, and Jacob J. Riddle, a merchant neighbor from Cincinnati in Greene, County, Indiana. The first Chief Engineer of the VBCo. was Benjamin F. Nesbit who was succeeded by mostly Purdue graduates. Their bridge designs were simplified and undecorated standard trusses in a range of long and short forms. Function and economy marked the Vincennes Bridge Company's bridges, rather than elegance and novelty.(1)

The Vincennes Bridge Company was not only capable of designing, manufacturing and fabrication of metal bridges, but also had the capabilities required to complete an entire project including the preparation of concrete substructures and the erection of the structures they manufactured. In early 1927 the Oliphants increased their company's capital stock from $50,000 to $750,000, making it the second largest metal fabricator in the state. When the Vincennes Bridge Company was dissolved in 1951, it was still owned by the Oliphant family.(1)

Design of the Pennsylvania Trusses

Adding an inclined top chord to a subdivided Pratt truss offers complementary advantages which the engineers of the Pennslyvania Railroad exploited. The first Baltimore truss was built in 1871; the first Baltimore truss with a polygonal top chord, a Pennsylvania truss, was erected in 1875. The combination of polygonal or inclined top chords with the Pratt permitted designers to adjust depth differentially within the truss, allowing the top and bottom chords to be further apart where required and reducing depth where redundant.(1)

Pennsylvania trusses did not appear on Hoosier (Indiana) highways, until the last few years of the nineteenth century, at which time they became the preferred truss for metal spans of 200 feet and longer until about the First World War. Of the nine Pennsylvania trusses which carry Hoosier roads, most were made in Indiana. As the firm's dedication photo of the dedication suggests, the Vincennes Bridge Company was proud of the two-span, 403 foot Pennsylvania trusses it built over the East Fork of the White River in Lawrence, County, Indiana.(1)

SOURCES OF INFORMATION

1. Cooper, James L., Iron Monuments to Distant Posterity, Indiana's Metal Bridges, 1870-1930. 1984.

2. Records and minutes of the Lawrence County Board of Commissioners (1910 - 1925)

3. Lawrence County Bridge Inspection Report, 1992

4. Local Testimony pertaining to the existence of the structure destroyed in the March 1913 Flood. (unverified)

5. Thirty-three years in the History of Lawrence County, Indiana, 1884 -1917. James McGuthrie, 1958,
Mitchell-Fleming Printing,Inc., Greenfield, Indiana (223 ppg)

6. History of Lawrence and Monroe Counties, Indiana, B. F. Bowen & Co. Inc., Indianapolis Indiana, 1914

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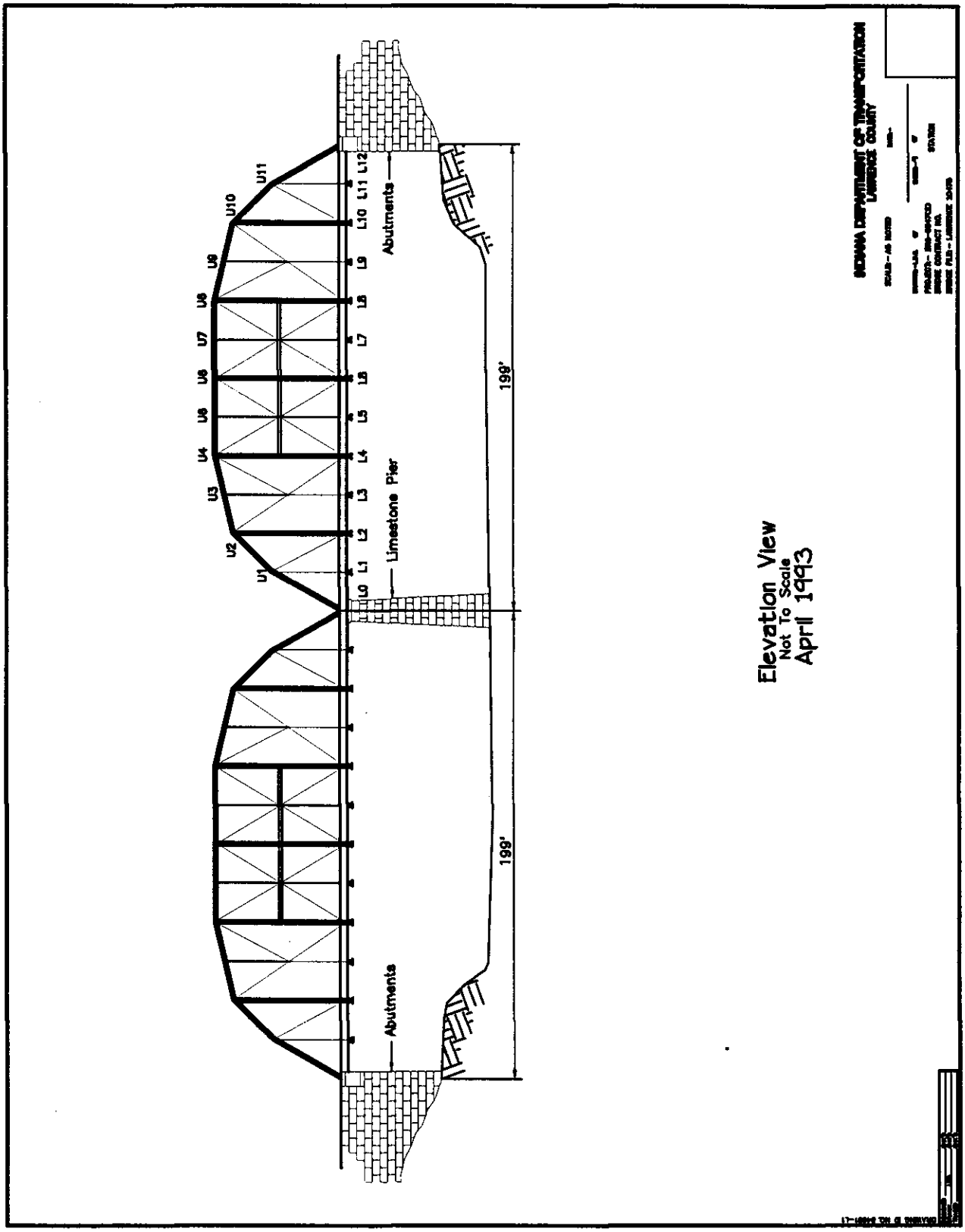

Elevation View
Not To Scale
April 1993